

Abstract

A method of forming a layer including mixing at least a first material and a second material to form a mixture, depositing the mixture on a surface, and polymerizing the mixture to form a polymer network. The polymer network being at least one of charge-transporting or luminescent has improved properties as compared to the first and second materials including the rate of polymerization, the power level, time, and/or amount of energy per unit of mass used for polymerizing. The polymer network may be formed on an alignment layer that is unrubbed such as a photoalignment layer. The polymer network may be fabricated with uniform structure and thickness. The polymer network may have a liquid crystal phase and includes few dangling radicals and molecular fragments.